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## UNIDENTIFIED SURFACE-TO-AIR MISSILE LAUNCH EXERCISE USSR

1. SIGNIFICANCE:

OBSERVATION OF AN UNKNOWN SURFACE-TO-AIR
MISSILE AND ITS ASSOCIATED GUIDANCE/TRACKING RADAR.

2. REMARKS:

AN UNIDENTIFIED SURFACE-TO-AIR MISSILE
AND ASSOCIATED MISSILE GUIDANCE/TRACKING
RADAR WERE REVEALED IN THE FILM, "ROCKETS
IN DEFENSE OF PEACE", WHICH WAS TELECAST ON
MCSCOW TV ON 9 MAY 65, FOLLOWING THE MOSCOW
PARADE OF THAT DATE.

3. LOCATION:

ANALYSIS OF KNOWN SOVIET MISSILE RANGES RE-VEALS THAT THE FIRING SEQUENCE SHOWN IN THE FILM PROBABLY OCCURRED AT LAUNCH PAD B-1, LAUNCH COMPLEX B, SARY-SHAGAN ANTIMISSILE TEST CENTER.

4. MISSILE CHARACTERISTICS:

PRELIMINARY ANALYSIS OF THE LAUNCH SEQUENCE
ALLOWS DEFINITION OF SOME CHARACTERISTICS OF
THE UNIDENTIFIED SURFACE-TO-AIR MISSILE
SHOWN ON A RAIL-TYPE LAUNCHER:

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GROUP 1 Excluded from Eutomatic downgrading and declassification

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THE MISSILE DISPLAYS A ROCKET-POWERED BOOSTER AND PROBABLY USES A TANDEM BOOSTER/SUSTAINER COMBINATION WITH SEPARABLE BOOSTER. THE BOOSTER'S FINS ARE RECTANGULAR. SIMILAR TO THOSE OF THE GOA'S BOOSTER. THE SUSTAINER FINS APPEAR TO BE RELATIVELY LARGE DELTA-CONFIGURED SURFACES. A TRAINABLE LAUNCH RAIL APPEARED TO LAUNCH THE MISSILE AT AN ELEVATION OF 50-60 DEGREES.

FIRE WHEEL CHARACTERISTICS:

FIRE WHEEL IS AN S-BAND FIRE CONTROL RADAR. THE PARABOLIC DISH IS APPROXIMATELY IN DIAMETER AND IS USUALLY MOUNTED NEAR THE END OF A TWO-AXLE TRAILER. IT HAS 8 FULL BRACES AND 8 HALF RADIAL BRACES, THE LATTER GOING FROM THE EDGE OF THE REFLECTOR TO A RING BRACE WHICH IS ROUGHLY HALF THE DIAMETER OF THE REFLECTOR.

FILMED RADAR CHARACTERISTICS:

THE RADAR SHOWN IN THE FILM SEQUENCE CONSISTS OF 2 FIRE WHEEL DISHES, PEDESTAL-MOUNTED ON A PLATFORM, AND A THIRD UNIDENTIFIED SMALLER DISH, ESTIMATED TO BE APPROXIMATELY ONE-HALF

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THE SIZE OF EACH OF THE LARGER DISHES AND MOUNTED AT THEIR SIDE. THE PEDESTAL IS TYPICAL OF THAT OF A SINGLE STEERABLE DISH MOUNTING, WITH PROVISION ON TOP FOR 3 DISHES. THE CONFIGURATION OF THE ENTIRE SET IS THAT OF AN UNIDENTIFIED GUIDANCE/ TRACKING RADAR.

BASED ON THIS RADAR IS IDENTIFIED AS PROBABLY LOCATED ADJOINING THE NW CORNER OF THE UNDERGROUND CONTROL CENTER NEAR LAUNCH PADS B-1 AND B-2.

## FILMED RADAR CAPABILITIES:

THIS EQUIPMENT APPEARS TO HAVE A 360 DEGREE TRACKING CAPABILITY. IN THE FILM SEQUENCE, THE RADAR WAS SHOWN MOVING FROM A STOWED TO A TRACKING POSITION DURING THE MISSILE LAUNCH. WITH THE BORESIGHT GENERALLY ORIENTED TOWARD THE LAUNCH PAD. AT LEAST THE 2 LARGE FIRE WHEELS MOVED IN THE SAME PLANE DURING THE ENTIRE SEQUENCE. THE SMALLER UNIDENTIFIED DISH IS OBSCURED BY THE LARGER DISHES DURING THE MAJORITY OF THE FILM SEQUENCE.

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## 8. ADDITIONAL OBSERVATIONS:

TRACKING RADAR IS OBSERVED ON

ADJOINING THE NE CORNER OF THE

CONTROL CENTER. THIS WAS NOT OBSERVED

IN THE SOVIET FILM. IT IS POSITIONED

ON A PLATFORM AND PEDESTAL SIMILAR TO

THAT PREVIOUSLY DESCRIBED. DETAILS OF THE

DISH CANNOT BE OBSERVED.

IN THE FILM SEQUENCE, A SEMI-CIRCULAR WALL,

PARTIALLY EMCOMPASSING THE LAUNCH POSI
TION, IS OBSERVED. THIS IS SIMILAR TO

THE WALLS WHICH PARTIALLY EMCOMPASS LAUNCH

PADS B-1 AND B-2 AT LAUNCH COMPLEX B.

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PREPARED BY: CSD/Research Branch

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